

ABSTRACT OF THE DISCLOSURE

A voltage regulator apparatus includes an error amplifier that amplifies a voltage difference between a reference and a sampled output voltage of the voltage regulator apparatus. A driver amplifier has an input that is responsive to the amplified voltage difference to produce a gate driving voltage at its output. An output transistor having a drain, a gate, and a source is also included. The gate is responsive to the gate driving voltage to produce a regulated output voltage at the source. To stabilize the voltage regulator apparatus, a Miller compensation capacitor is provided to feed a sample of the regulated output voltage back to the input of the driver amplifier; and additionally, an Ahuja compensation circuit is provided to feed back a portion of the regulated output voltage back to the input of the driver amplifier.

